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Exploring the Role of Islamic Microfinance Institution in Poverty Alleviation Through Microenterprises Development, A Case Study of Islamic Financial Cooperative (BMT) in Indonesia

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Abstract

Poverty alleviation might be carried out through many different approaches. Among others, provision of access to financing for microenterprises is likely to be important considering that the main problem of microenterprises is fast and easy access to financing. Taking into account that the majority of Indonesian population are Muslim, provision of Islamic micro financing, particularly through BMT (*Baitul Maal wa Tamweel*) to microenterprises could be one potential solution.

This study aims to explore and analyse the role of BMTs in East Java in microenterprises development and poverty alleviation by referring to their micro-dynamics. The paper also aims to propose strategies to improve their roles in local economic development.

Research survey was employed by distributing questionnaires to the clients of eleven BMTs in six cities/towns, in order to find out their perceptions on economic impacts after receiving financing from BMTs for productive purposes. Primary data collected from 179 completed questionnaires, in which large majority of the respondents are microenterprises in urban area, was analysed in this research.

The findings of the Wilcoxon Signed Rank Test discover statistical significant improvement after financing on the value of annual sales, net income, business expenditure, household expenditure, and employment. The respondents also indicate minor positive effect on business activities and monthly household expenditures of food, education, and household utensils. In addition, based on the Head Count Index and poverty line set up by BPS in 2012, the findings importantly suggest that the financing contributes in reducing the percentage of poor respondents: from 44.4% before financing to 36.3% after financing. Further analysis based on Spearman Rank Order Correlation suggest that there are positive significant relationships between economic impact variables and productive assets, total loan received and total workers.

To improve their roles in poverty alleviation, it is suggested that BMTs should offer higher amount of financing, provide more social services to their clients, to provide more information of their financing products to wider community, to better educate their customers in order to improve customers' understandings on Islamic terms used in financing products, and to innovate their financing products to meet the customers needs. In addition, to assist

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the BMTs development, the government could play an important role by being more active in monitoring process and promoting stronger linkage with formal financial systems, while keep maintaining the unique characters and independency of BMTs. With such a proactive strategy, it is expected that a more positive impact can be achieved.

I. Introduction

Poverty, among others, could be considered as the one of the most difficult problems faced by most countries worldwide. Being a developing country with a large population, Indonesia has a long history of fighting against poverty. Indonesia has the world's fourth largest population with 241 million people in 2011 (Asian Development Bank, 2012). Having a large population but without the sufficient prosperity, Indonesia faces common socio-economic problems namely poverty and unemployment. The Statistics Indonesia measure poverty based on people's ability to meet their basic needs; hence, people are considered 'poor' if they are economically unable to fulfil food and non-food basic needs, measured by consumption/ expenditure per capita per month (BPS, 2012b: 158). In March 2012, the poverty line applied is defined as IDR 267,408 (equal to around USD 30) which, particularly in East Java, is IDR 245,305 (BPS, 2012b: 215). Thus, according to the statistics the number of people living in poverty was 29,13 millions, corresponding to 11.99% of the population, in March 2012.

According to the February 2012 dataset, the level of unemployment was 6.32% (7,61 millions) (BPS, 2012a: 55). As regards to human development in Indonesia, the UNDP ranks Indonesia 124th in terms of HDI in 2011 which, unfortunately, is lower than the rank in 2010 which was 108th; however, despite the adverse trend in the HDI ranking, it should be noted that the value increased from 0.600 in 2010 to 0.617 in 2011 (UNDP, 2010: 145; 2011: 124). This indicates that other countries in the world have developed their HDI values higher than Indonesia. Moreover, the UNDP report in 2009 ranked Indonesia 111th in the HPI (Human Poverty Index); this ranking was no longer provided in HDR 2010 and 2011 (UNDP, 2009: 177).

In responding to economic challenges, including poverty and human development, it should be noted that Indonesia, on the other hand, has a large number of microenterprises (MEs), which form a strong pillar of the national economy. In 2008, statistics showed that microenterprises accounted for 98% of the total number of enterprises, which is considered very high, contributing around 32% of the total GDP, and absorbing the highest number of employees (89.3% of the total labour force); however, their export value was the lowest.

Considering that some of the possible solutions to the problem of poverty alleviation include capacity-building and individual empowerment, developing microenterprises is considered an important policy option. However, microenterprises experience challenges

and barriers in their operations, particularly difficulties in financial access: "only 22% of micro and small enterprises had access to financing facilities from banks and other micro or non-bank financial institutions" (Ascarya and Yumanita, 2007: 1). As such a large number of microenterprises have problems with financial access, it is necessary to provide support to help them obtain financing and thus reduce poverty. Moreover, taking into account that Indonesia is the world's most populous Muslim country, Islamic microfinance institutions could play an important role in serving this market.

This research focuses only on Islamic microfinance institution in Indonesia, particularly BMT (*Baitul Maal wa Tamweel* / Islamic Financial Cooperative), as one of the main players in Islamic Microfinance Institutions (IsMFI) in Indonesia. BMT has unique character: this community based organisation has cooperative legal base and providing financing services to the low level society with more flexibility and faster than banks. BMT also helps promote Islamic values in economic activities in their financing products. However, there is limited research has been done to assess their role in poverty reduction and economic development. Therefore, this gap yet seems to be unexposed.

This paper is organised as follows: section two presented the research question, followed by theoretical based of Islamic microfinance and previous research on BMT, with research methodology presented in section four. In section five, the research result is discussed and recommendations are suggested. In the final section, conclusion of the whole paper is discussed.

II. Research Questions

This paper aims to explore the role of BMT in poverty reduction and economic development, particularly in their economic impacts in order to propose strategies to improve the impacts. Therefore, the research questions are:

a. What roles BMT can play in microenterprises development?
b. What roles BMT can play in poverty alleviation?
c. What variables have significant relationship with economic impact improvement?

III. Islamic Microfinance and Poverty Alleviation: A Literature Survey

3.1. Islamic Microfinance

The characters of Islamic Microfinance is shaped by the Quran and *hadith*, mainly emphasizing on providing access to the poorest of the poor, in which the credit appraisal is conducted carefully with empathy to provide clients with the best services, provision capacity building programs and technical assistance (Obaidullah, 2008b). Chapra (1992a) argues that the objectives of *Shari'ah* (Islamic guidance) will be achieved more efficiently through promoting microenterprises develoment; it reduces concentration of wealth and

promotes social justice. Further, Asutay (2010: 29) emphasizes that the most suitable method to implement Islamic Moral Economy (IME) in Islamic Banking and Finance (IMF) can be through conducting social banking and Islamic microfinance (IMF) (Asutay, 2010). Therefore, considering that the basic concept of Islamic microfinance relates closely to the poor and capacity building, IsMFI are considered important to realise the 'promise' of social justice in the current society.

3.2. The Role of Islamic Microfinance Institution in Economic Development and Poverty Alleviation

Focusing on BMT and BPRS, Antonio argues that those institutions serve the poor in a better approach compared to other banks, due to the simple administrative process and products flexibility (Antonio, 2008). However, these type of microfinance institutions face the problems of competing with Islamic commercial banks, having the smaller number of branches, it is hard for them to compete.

Some research has been conducted in assessing the potential role of BMT. A study found BMT contributes to microenterprises development, based on t-test on business income, profit and assets from survey to microenterprises (Chokro and Ismail, 2008). Furthermore, Sakai argues that BMTs have developed financing services, despite the limited start up capital, it able to provide financial source to microenterprises as an alternative other than moneylenders. Further, he points out that new economic opportunity are brighter for the poor community as BMT facilitate their business (Sakai, 2008) . The study in three years period (2006, 2007, 2008) among women in Central Java in relation to BMTs services to enhance their microenterprise finds that BMTs contribute to improve women's economic independents through their financial services (Sakai, 2010). A study on three BMTs under Yayasan Peramu Bogor, West Java suggests positive impact in the value of assets, sales, net income and Return on Assets (ROA) (Widyaningrum, 2002). The same positive finding on significant impact on poverty reduction was also presented by a survey study on the poor customers of BMT MMU in East Java (Ajija and Adnan, 2011).

IV. Research Method

To answer the research questions, this research employs a quantitative method, in particular an exploratory, descriptive, survey and case-study-oriented research design was employed in relation to BMTs in East Java, Indonesia. The method of data collection involves quantitative data collection based on purposive sampling through structure questionnaires distributed to MEs that borrow from eleven BMTs[1] willing to participate in this research. The purpose

1 The BMTs involve in this study are located in Malang, Pasuruan, Lumajang, Probolinggo, Tulungagung and Surabaya.

of questionnaires is to find how they perceive the impact of financing to their businesses. Therefore, the criteria of choosing the respondents were: (i) they have received financing from BMT, (ii) they have had a business, whether as main source of income or not to be a main source of income, (iii) they have used the financing for productive purposes to improve their microenterprises.[2]

The quantitative data obtained from 179 completed questionnaires are analysed with the use of statistical tests including descriptive, Mann-Whitney-U Test, Wilcoxon-Signed Rank Test and Spearman Rank Order Correlation. The Wilcoxon-Signed Rank Test was employed to analyse the changes before financing and after financing in monthly sales, net income, business expenditures, household expenditures and changes in the numbers of workers. While Spearman Rank Order Correlation was utilised to find relationship among independent variables and economic impact variables. In addition, to measure the poverty reduction, the Head Count Index was utilized.

V. Analysis and Discussion

5.1. Descriptive Statistics

The summary of socio-demographic and business profile of the respondents who have received financing from BMTs is presented in Appendix 1. The data depicts that most of the respondents were married (93.3%), male (53.6%) and in productive age between 31–40 years (36.3%). In particular to education, large majority of the respondents (86% in total) has educational background of Senior High School and below, while the rest of the respondents had university background. Specifically, almost 30% of the respondents graduated from Senior High School (29.8%), thus having 9 years of education has provided them with sufficient basic knowledge to manage microenterprises. In term of the household size, most of the respondents were responsible for managing between 4 to 6 family members (61%); whereas on average, the family members was 4 persons, which could be considered as a small family size.

It should be noted that all the respondents were Muslims, which might be a sign that BMT are focusing their services on Muslims and are not interested in the potential non-Muslim market. Moreover, it term of religious education, majority of respondents reported not having religious educational background (56%), whether formal or informal.

As for the respondents' business profile, the findings reveal that, based on productive assets owned which is less than IDR 50 millions, the size of the respondents' businesses was categorised as microenterprises (95%) and large majority of the respondents (84.3%) relied on their businesses as main source of income. Furthermore, the results found that majority of the businesses were located in urban area (73%) and in trade/shops/retail business (61%).

2 The survey was conducted from mid August until early November 2011.

5.2. Impact on Sales, Business Expenditure and Net Income

Table 1 shows the findings of the Wilcoxon Signed Rank Test on the impact after financing on annual sales, business expenditures and net income. As can be seen from the table, there is a statistically significant improvement of annual sales, business expenditures and net income after financing at p=0.000, which is below the confidence level of 0.05. The annual sales improved by IDR 36,000,000 (50%), while the business expenditures and net income improved by IDR 24,000,000 (50%) and IDR 3,300,000 (23%) respectively. This improvement indicates positive role of BMTs in improving the respondents' businesses performance.

In regards to impact on sales, this finding are align with what has been found in previous research in other provinces in Java. In particular, the improvement could be considered slightly higher as compared to the previous findings of research BMT in six cities in Java[3] as it is reported that the average sales improvement was IDR 1,417,769, which is 21.36% higher after the customers building partnership with BMT (Amalia, 2008: 13). However, compared to a study by Widyaningrum (2002: 131) which found around 60% improvement on sales, this findings could be considered lower, which could be due to larger number of respondents from larger number of institutions applied in this study.

Table 1: Wilcoxon-Signed Rank Test : Impact On Annual Sales, Business Expenditure And Net Income

Variable	Description	N	Median Rank	Z	Asymp. Sig. (*p*)
Sales	Before financing	179	72,000,000	-8.097	.000
	After financing	179	108,000,000		
	Increase		36,000,000		
Business expenditures	Before financing	179	48,000,000	-8.315	.000
	After financing	179	72,000,000		
	Increase		24,000,000		
Net Income	Before financing	178	14,700,000	-8.042	.000
	After financing	179	18,000,000		
	Increase		3,300,000		

As for the impact on net income, this findings support the previous research. A study comparing the income before and after financing shows an average monthly income improvement of IDR 472,328 (19.58%) (Amalia, 2008: 7). Further, a study by Ajija and Adnan (2011) shows that BMT MMU East Java have a positive contribution in developing a significant impact on improving household income by around 50%, from IDR 1,097,700 before financing to IDR 1,669,100 after financing. Thus, the findings of this research are

3 Tangerang, Depok, Jakarta Selatan, Jakarta Barat, Jakarta Timur, Wonosobo and Yogyakarta.

similar to the previous research in BMT MMU, and much higher than IsMFIs in other provinces in Java. A study on BMT in Indonesia found around 70% of the respondents reported net income improvement after financing, however, a decline of net income also occurred in the business of 27% to 60% of the respondents (measured separately for different age of business) has also been presented (Widyaningrum, 2002: 131). In addition, Rahman (2010: 177) presents that the average improvement of customers' income reached 33% after joining RDS IBBL, particularly the client who run small businesses as compared to other types of businesses. These positive findings provide support evidences that IsMFI, particularly BMT, are likely to have positive role in real income improvement.

5.2. Impact on Household Expenditures

The findings depict that majority of the respondents reported there is no impact on household expenditure (see Appendix 2). However, some positive impact were also by reported the respondents; in which food expenditure (27.7%) is the largest positive impact, followed by expenditure on education (26.6%) and household utensils (26.2%). This implies that any improvement on household income is likely to be consumed for food, education and household utensils expenditures.

Further, the Wilcoxon Signed Rank Test was utilized to investigate whether there is a change in the value of annual household expenditure from before financing to after financing (Table 2). As can be seen from Table 2, annual household expenditure were significantly higher after financing (median= IDR 14,400,000) than annual household expenditure before financing (median= IDR 12,000,000), at significant level of p= .000.

Table 2. Wilcoxon Signed Rank Test: Impact On Household Expenditures

Variable	Description	N	Median Rank	Z	Asymp. Sig. (*p*)
Annual household expenditures	Before financing	178	12,000,000	-6.197	.000
	After financing	179	14,400,000		
	Increase		2,200,000		

In addition, the Mann-Whitney U-test was employed to explore the statistical significant difference between subgroups in business area and impact on monthly household expenditure after financing (Table 3). The findings presented in Table 3 shows the statistical significant difference among subgroups of business area in food, education, clothing, transport and household utensils. The statistical significant differences were not found in health/medical expenditure. The higher mean ranks indicate the least effect, therefore, the respondent who are in rural areas had least effect in general. In other words, the financing effect was higher in urban area.

In comparison to the previous research, this findings show similar results with the findings of a survey in RDS IBBL which show that the household expenditures increase, which is food expenditure being the largest improvement, followed by house repair and maintenance, and medication expenditure (Rahman and Ahmad, 2010: 178).

Table 3. Mann-Whitney U-Test: Impact on Monthly Household Expenditures

Variable	Subgroup Area of Business	N	Mean Rank	Z	Asymp. Sig. (*p*)
Food	Rural	46	100.20	-2.154	.031
	Urban	131	85.07		
	Total	177			
Health/medical	Rural	46	91.92	-.595	.552
	Urban	132	88.66		
	Total	178			
Education	Rural	46	100.52	-2.274	.023
	Urban	131	84.95		
	Total	177			
Clothing	Rural	46	99.13	-2.087	.037
	Urban	132	86.14		
	Total	178			
Transport	Rural	46	99.12	-2.206	.027
	Urban	132	86.15		
	Total	178			
Household utensils	Rural	47	105.91	-3.186	.001
	Urban	132	84.33		
	Total	179			

5.3. Impact on Economic Activities

In relation to the impact on economic activities, the findings show the highest impact on economic activities are improvement on volume of goods/services (by 75% of the respondents), quality of goods/services (by half of the respondents), diversification into new goods/services; while production technology and bookkeeping seems are not really affected (see Appendix 3). This high impact could be considered as a positive indicator that the funds are directly utilised for business development in terms of volume, quality and new products development. Improvement on volume of goods/services turns up as the highest impact, which could be due to simple and direct approach in utilising the funds.

This finding support the previous finding, as the improvement in volume of goods/services is also revealed in Bangladesh, showing that the respondents of an IMFI achieve more than 50% improvement in volume of goods/services after received the funds, while the

other two IsMFIs improved around 10% (Ahmed, 2002: 45). In particular, diversification into new goods/services seems to be less affected (37%) than the improvement in volume and quality of goods/services, which is similar to the findings of the previous research (Ahmed, 2002: 45).

It should be noted that although technology and bookkeeping are likely to be neglected in this study, that majority of the respondents (60%) are in retail business (descriptive analysis, not reported), in which the technology improvement is likely less required. Unfortunately, lack of awareness in maintaining a proper bookkeeping seems still occurs largely, which is a common trend among MEs. Hence, it is suggested that the BMTs should provide more trainings on how to maintain a simple proper bookkeeping; in which the trainings which could be conducted in cooperation with universities under the higher education community services (development) programs.

To explore further which group of business area were more prevalence to the impact on economic activities, Table 4 presents the findings of Mann Whitney U-test. The findings suggest statistical significant difference among sub-group of area of business, those are on volume on goods/services sold (p= .020), diversification into new product (p= .042) and premises (p= .004). The same test did not produce statistical significance on production technology, quality of goods/services and bookkeeping. Based on the mean rank, the respondents who were in urban area had higher positive impact as compared to the respondents who were in rural area.

Table 4. Mann-Whitney U-Test: Impact on Economic Activities

Variable	Subgroup	N	Mean Rank	Z	Asymp. Sig. (p)
Volume of goods/services sold	Rural	47	104.31	-2.317	.020
	Urban	132	84.91		
	Total	179			
Diversification into new goods/services	Rural	45	100.31	-2.015	.042
	Urban	132	85.14		
	Total	177			
Premises	Rural	47	101.06	-2.933	.004
	Urban	132	86.06		
	Total	179			

5.5. Impact on Employment

To investigate the impact on employments, the Wilcoxon Signed Rank Test was employed in order to see whether there is a change in the number of male workers, female workers and total workers from before financing to after financing (Table 5). The findings of the test show male workers were significantly higher after financing (mean= 1.36) than before financing

(mean=1.00), at significant level of p= .000 which is lower than the confidence level of .05. The number of female workers were also higher after financing (mean=1.28) than before financing (mean=1.09), at significant level of p=.000. In total, the number of workers after loan after financing (mean= 2.64) was higher than before financing (mean= 2.09).

Similarly, the positive impact on employment has also been pointed out by Ahmed (2002: 45), showing that the time used in business (by both respondents and other family members) significantly increased after they received IMFI's funds. In addition, Rahman (2010: 178) also points out the average improvement in the family members involved in the business after joining RDS IBBL, from 1.96 to 2.1 family members respectively.

Table 5. Wilcoxon Signed Rank Test: Impact on Employment

Variable		N	Mean Rank	Z	Asymp. Sig. (*p*)
Male workers	Before financing	179	1.00	-4.457	.000
	After financing	179	1.36		
	Increase		0.36		
Female workers	Before financing	179	1.09	-4.146	.000
	After financing	179	1.28		
	Increase		0.19		
Total workers	Before financing	179	2.09	-5.599	.000
	After financing	179	2.64		
	Increase		0.55		

5.6. Impact on Poverty Alleviation

The role in poverty alleviation is measured based on Head Count Index, calculated by dividing the number of respondents living under the international and national poverty line by total respondents. The international poverty line of USD 2/person/day was equal to IDR 17,589/day/person and IDR 527,660/month/person. While the Statistics Indonesia set up East Java's poverty line of IDR 245,035/person/month in March 2012 (BPS, 2012b: 215). Based on these two standards, a comparative analysis before and after financing for each type of institution was conducted, as presented in Table 6. As the poverty line is set up based on individual household expenditure, thus the computed process was conducted by multiplying the number of each respondent' total family members with poverty line as baseline of judgment whether the respondents living under or above the poverty line.

The BMTs' respondents living under the international poverty line were 85,4% before financing, reduced to 84,4% after financing, which means there was only 1% reduction. While under the Statistics Indonesia' poverty line, 44,4% of the respondents were living under the poverty line before financing, and it reduced to 36,3% after financing (8% reduction). Hence, the percentage of reduction is lower as compared to measurement based on the national

poverty line. This might be due to a high level of international poverty line, which is almost double than the national poverty line. Hence, although the micro financing contribute to improve the household expenditure, the improvement could not reach above the international poverty line. It should be noticed that the minimum household expenditure improve after financing as compared to before financing.

The findings of reduction of respondents living below poverty line could be consider lower as compared to the findings of a previous research in BMT MMU, as it could reduced from 52.6% to 30.1% (Ajija and Adnan, 2011: 76).

Table 6: Number Of BMTs' Respondents With Household Expenditure under the Poverty Line

		Frequency	Percent	Mean	Standard Deviation
Internatioanl Poverty Line of USD 2/day equal to IDR 17,589/day/person (IDR 527,660/month/person)					
Monthly Household expenditure (before loan)	Below poverty line	152	85.4	-872,832.24	1,071,870.56
	Above poverty line	28	14.6		
	Total	178	100		
	Minimum	-4,148,940			
	Maximum	3,361,700			
Monthly Household expenditure (after loan)	Below poverty line	151	84.4	-748,741.78	1,075,823
	Above poverty line	28	15.6		
	Total	179	100		
	Minimum	-3,848,940			
	Maximum	3,361,700			
Indonesia Poverty Line of IDR 245,035/month/person					
Monthly Household expenditure (before financing)	Below poverty line	79	44.4	284,660.02	900,133.36
	Above poverty line	99	55.6		
	Total	178	100		
	Minimum	-1,605,315			
	Maximum	4,774,852			
Monthly Household Expenditure (after financing)	Below poverty line	65	36.3	408,599.69	906,311.51
	Above poverty line	114	63.7		
	Total	179	100		
	Minimum	-1,305,315			
	Maximum	4,774,825			

5.3. Correlation Analysis

This section provides further analyses of the relationship among independent variables and economic impact variables based on Spearman Rank Order Correlation. The result of correlation provides indication on the strength of relationship which can range between -1 to +1. The size of absolute value of coefficient correlation indicates the strength of relationship,

could be categorized into three group: small (.10 to .29), medium (.30 - .49) and large correlation (.50 - 1.0) (Cohen, 1988 cited by (Pallant, 2007)). The correlation coefficients are presented based on the significance level of 1% and 5% (see Appendix 4).

The findings depict that there are statistical significant correlation between all economic impacts and productive assets, total financing, net income and total workers (see Appendix 4). In details, productive assets have positive correlation to sales, net income, business expenditure, household expenditure and total assets, with medium strength of relationship in all cases. This implies that the respondents having larger value of productive assets relate to higher economic impact. The value of assets also represent the size of the business, thus, this findings indicate that larger size of business is likely to have high positive impact. One possible reason, perhaps, the owner of the larger business has higher capability and more experience to manage the business, lead to high economic impact.

Moreover, other positive significant correlation also has been found between economic impacts and total financing received, with small and medium strength of relationship. Hence, this indicates that the respondents who received higher amount of total financing relate to high economic impact. Other positive significant correlation have been found between total workers and economic impact, which indicate that the respondents having larger number of workers relate to high economic impact.

This findings support the previous finding by Beik and Purnamasari (2011: 13), who suggests that the daily income level after financing is positively affected (81%) by daily business profit, monthly consumption and proposed financing application. However, it should be noted that in this result, the demographic profile rarely has significant correlation with the economic impact, except gender which only relate to changes in total workers. Thus, these findings are contradict with the findings of an impact analysis of IsMFI in Thailand, which found that demographic profile, includes gender, occupation and age, were the variables relate to high economic impact (Naipom, 2013). Therefore, this may indicate that the respondents of BMTs in East Java are more affected by the technical and economical consideration, rather than demographic background.

VI. Conclusion and Recommendation

The main objectives of this research are to explore the role of BMT in economic development and poverty alleviation. The main findings suggest that BMT has played a positive role in poverty reduction and economic impact, which include improvement on sales, business expenditure, net income, household expenditure and employment. The economic activities also show some positive improvement, particularly in developing volume of the products, in which the respondents in urban area are more prevalent to positive economic impact than the respondents in rural area. It should be noted that the variables which are significantly related

to high economic impact are productive assets, total financing received, net income and total workers. Hence, this indicate that improvement of productive assets, financing fund, net income and total workers are likely to improve economic impact.

Based on the above findings and considering that BMT has lack of fund, lack of supervision and monitoring, therefore, the proposed recommendation to improve economic impact are as follow:

(i) To improve economic impact, BMT should offer higher amount of financing to capable clients, to provide more social development programme/services to their clients in the form of management, technical, religious trainings and consultancy services, to be more intense in socializing their financing products to wider community, to better educate their customers, to improve customers' understandings on Islamic terms used in financing products and to innovate their financing products to meet the customers need.

(ii) To assist BMT development, the government could play more active role in monitoring process and promoting stronger linkage with formal financial system, while keep maintaining the unique characters and independency of BMT. With such a proactive strategy, it is expected that a more positive impact can be achieved.

Finally, it is important not to generate the findings for all BMTs in Indonesia, as this research has a number of limitations, such as number of respondents, research design and analysis. This research was limited only to eleven BMTs in East Java with 179 total respondents; hence, improvement could be done by enlarging the scope and the numbers of respondents. In addition, this research was conducted only on one occasion; an ideal impact analysis should be conducted on many different occasions, wherever possible. Moreover, the statistical test analysis applied in this research is considered simple due to time constraints and word limitations; thus, the application of more robust statistical tools, such as regression analysis, would probably have produced more persuasive findings to find the determinants of economic impact.

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Appendices

Appendix 1: Socio-Demographic and Business Profile of Respondents

Socio-demographic and business profile		Frequency	Percentage	Mean
ME as main source of income	Yes	150	84.3	1.16
	No	28	15.7	
	Total	178	100	
Marital status	Single	5	2.8	2.02
	Married	166	93.3	
	Widowed	6	3.4	
	Divorce/separated	1	0.6	
	Total	178	100	
Gender	Male	96	53.6	1.46
	Female	83	46.4	
	Total	179	100	
Age	Below 20	0	0	41.03
	21-30	28	15.6	
	31-40	65	36.3	
	41-50	56	31.3	
	51-60	21	11.7	
	Above 61	9	5.1	
	Total	179	100.0	
Last completed education	Not completed Primary School	15	8.4	3.43
	Primary school	45	25.3	
	Junior High or equivalent	39	21.9	
	Senior High or equivalent	53	29.8	
	Diploma I/II	3	1.7	
	Diploma III	0	0	
	Diploma IV/Bachelor (S1)	23	12.9	
	Total	178	100.0	
Religious education	Formal	36	20.2	2.36
	Informal	42	23.6	
	None	100	56.2	
	Total	178	100.0	
Household size	1-3 persons	64	35.75	4.09
	4-6 persons	109	60.89	
	7-9 persons	6	3.35	
	Total	179	100	
Business field	Trade/shops/retail	109	60.9	2.37
	Manufacturing/craftsman	9	5.0	
	Services	18	10.1	
	Transportation	1	.6	
	Agriculture services/stock breeder	12	6.7	
	Food production (small café, catering)	30	16.8	
	Total	179	100.0	
Area of business	Rural	47	26.3	1.74
	Urban	132	73.7	
	Total	179	100.0	
Productive assets	Below IDR 50 millions (micro)	170	95.5	12,097,752
	IDR 51 - IDR 500 millions (small)	8	4.5	
	Total	178	100.0	

Appendix 2: Descriptive Analysis of the Impact on Household Expenditures

Impact variables	Major negative effect	Minor negative effect	No effect	Minor positive effect	Major positive effect	Total	Mean	SD
Food	1	3	124	45	4	177	3.27	.559
	0.6%	1.7%	70.1%	25.4%	2.3%	100%		
Health/medical	0	2	151	22	3	178	3.15	.427
	0	1.1%	84.8%	12.4%	1.7%	100%		
Education	1	1	128	43	4	178	3.17	.538
	0.6%	0.6%	72.3%	24.3%	2.2%	100%		
Clothing	1	1	141	31	4	178	3.20	.503
	0.6%	0.6%	79.2%	17.4%	2.2%	100%		
Transport	1	1	146	28	2	178	3.16	.453
	0.6%	0.6%	82.0%	15.7%	1.1%	100%		
Household utensils	0	1	131	45	2	179	3.27	.481
	0	0.6%	73.2%	25.1%	1.1%	100%		
Furniture/electronic purchase/year	1	0	145	31	1	178	3.17	.436
	0.6%	0	81.5%	17.4%	0.6%	100%		

Appendix 3: Descriptive Analysis of the Impact on Economic Activities

Impact variables	Negative effect	No effect	Minor Positive effect	Moderate Positive effect	Major positive effect	Total	Mean	SD
Volume of goods/ services	4	55	47	65	8	179	3.10	.966
	2.2%	30.7%	26.3%	36.3%	4.5%	100%		
Quality of goods/ services	2	115	22	37	3	179	2.58	.886
	1.1%	64.2%	12.3%	20.7%	1.7%	100%		
Diversification into new goods/services	1	114	27	30	5	177	2.57	.877
	.6%	63.7%	15.1%	16.9%	2.8%	100%		
Production technology	2	161	11	3	1	178	2.10	.426
	1.1%	90.4%	6.2%	1.7%	.6%	100%		
Bookkeeping	2	160	9	7	0	178	2.12	.454
	1.1%	89.9%	5.1%	3.9%	0	100%		
Premises	0	156	8	10	5	179	2.24	.681
	0	87.2%	4.5%	5.6%	2.8%	100%		

Appendix 4: Spearman Rank Order Correlation: Impact on Improvement of Sales, Income, Expenditures and Numbers of Workers After Financing.

Independent Variables	Impact						
	Sales	Income	Bus exp.	House exp	Total worker	Male worker	Female worker
ME as main income	.005	.020	.003	-.028	-.073	-.039	-.017
Other income	.082	.059	.047	-.009	.079	.049	.082
Marital	-.044	-.021	-.018	-.109	-.070	-.134	.053
Gender	-.028	-.030	.052	-.117	-.198**	-.242**	-.048
Age	-.064	-.061	-.084	-.147*	-.110	-.132	.019
Education	-.025	-.045	-.119	-.038	.067	.106	-.015
Religious education	-.147*	-.110	-.104	-.230**	-.252**	-.265**	-.177*
Household size	.066	.010	.023	.031	.013	.057	-.057
Business area	-.076	-.113	-.087	-.210**	-.191*	-.244**	-.084
Business age	.154*	.101	.083	.021	.044	-.041	.141
Asset land	.210**	.205**	.166*	.106	.225**	.176*	.189*
Building	.123	.051	.075	-.014	.058	.061	.006
Private car	.086	.026	.065	-.044	.089	.095	.021
Cattle	.078	.088	.078	.029	.118	.081	.095
Productive asset	.333**	.324**	.336**	.228**	.149*	.181*	.017
Electric goods	.267**	.227**	.198**	-.022	.139	.117	.033
Jewellery	-.036	-.083	-.049	.052	.156*	.091	.094
Saving	.153*	.125	.097	.088	.065	.054	.100
Member of group	.022	-.012	-.005	-.060	-.014	.004	-.006
Membership length	.067	.113	.040	.138	.248**	.200**	.191*
Borrowers length	.053	.061	.042	.136	.243**	.168*	.206**
Times borrow	.112	.097	.070	.100	.223**	.157*	.187*
Duration loan payment	.042	.054	.037	.133	.069	.032	-.003
Total loan	.225**	.191*	.166*	.278**	.343**	.278**	.234**
Actual use loan	-.085	-.094	-.086	.100	.014	.014	.018
Installment	.053	.106	.030	.236**	.231**	.151*	.185*
Male worker	.094	.140	.056	.262**	.403**	.581**	.003
Sales	.485**	.309**	.400**	.076	.135	.127	.041
Net income	.435**	.554**	.371**	.181*	.179*	.221**	.031
Business expenditure	.355**	.230**	.441**	-.005	.107	.067	.049
Household expenditure	.088	.064	.082	.102	.015	-.030	.084
Worker female after	.189*	.173*	.193**	.091	.133	-.141	.469**
Total worker after	.297**	.341**	.275**	.300**	.548**	.490**	.299**
Management training	.003	.043	.029	.081	.017	.045	.049
Technical training	.008	.087	-.012	.086	.157*	.174*	.200**
Consultancy	.095	.097	.113	.022	.056	.118	-.072
Religious training	.070	.043	.061	.028	.234**	.177*	.115

Note: Correlation coefficients are presented

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).